

We Claim:

1. An apparatus for use in a lifting and towing vehicle, comprising:
a transverse cross bar connected to the end of a boom located rearwardly of the lifting and towing vehicle, the cross bar being positionable below a towable vehicle, the cross bar having two opposing end portions positionable adjacent to one of a pair of wheels on the towable vehicle;
two receivers each removably connected to the opposing end portions of the cross bar, each receiver carrying a wheel support member having an elongated arm and a wheel retainer, the wheel support members capable of being swung back and forth in a generally horizontal plane;
one or more powering mechanisms driving movement of the wheel support members in the generally horizontal plane;
whereby the receivers with the wheel support members comprise a wheel lift apparatus which may be rapidly disassembled from the cross bar in the field to permit conversion from the wheel lift apparatus to an alternate towing apparatus.
2. The apparatus of Claim 1, wherein the apparatus comprises a self-loading wheel lift.
3. The apparatus of Claim 1, wherein the alternate towing apparatus comprises a tow bar.
4. The apparatus of Claim 3, wherein the tow bar includes frame fork attachments.
5. The apparatus of Claim 1, wherein the elongated arms may be swung in the horizontal plane from a position inside tires of the towable vehicle to a wheel engaging position.
6. The apparatus of Claim 1, further comprising one or more mechanisms facilitating rapid connection and decoupling of each receiver from the cross bar.

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7. The apparatus of Claim 6, wherein the mechanism comprises a cam lock including a rotatable handle and a spring-loaded plunger pin.
8. The apparatus of Claim 1, wherein the powering mechanism comprises one or more hydraulic cylinders.
9. The apparatus of Claim 8, wherein the one or more hydraulic cylinders communicate with cylinder rods that are removably attached to the receivers.
10. The apparatus of Claim 9, wherein a distal end of each cylinder rod includes an aperture for use in coupling each cylinder rod to a receiver.
11. The apparatus of Claim 9, wherein each cylinder rod comprises two component rods that are connected to each other and that may rapidly disconnected.
12. The apparatus of Claim 11, wherein one component rod is slidable within the other and the component rods are connected by a removable locking pin.
13. The apparatus of Claim 1, wherein each wheel support members is pivotally attached to a receiver using a pivot pin.
14. The apparatus of Claim 1, wherein the pivot pin is prevented from being disengaged by a retaining screw.
15. The apparatus of Claim 1, wherein the attachment of each wheel support member to each receiver comprises two generally parallel plates, one plate lying above the cross bar and one plate lying below the cross bar.
16. The apparatus of Claim 1, wherein each wheel support member comprises an L-arm.
17. The apparatus of Claim 1, wherein the boom comprises an extensible and retractable

boom, and further comprising a hydraulically powered actuator to move the boom into different angular orientations relative to horizontal.

18. The apparatus of Claim 1, wherein the end portions of the cross bar are horizontally moveable relative to the rest of the cross bar.

19. A method for using a lifting and towing vehicle, comprising the steps of:
positioning a boom adjacent a towable vehicle, the boom carrying a transverse support beam;

positioning the transverse support beam below a towable vehicle, the support beam having two opposing end portions each supporting removably connected receivers, each receiver carrying a wheel support member, the wheel support members being pivotally connected to the receivers and capable of being swung back and forth in a generally horizontal plane, the receivers and wheel support members comprising a wheel lift apparatus;

positioning a wheel engaging portion of each wheel support member adjacent and between each of a pair of wheels of the towable vehicle, and then causing the wheel engaging portion to rotate outwardly toward the wheels of the towable vehicle into a wheel engaging position, one or more powering mechanisms driving movement of the wheel support members in the generally horizontal plane;

lifting and towing the now wheel-engaged and towable vehicle to a desired location;

disengaging the towable vehicle; and

converting the lifting and towing vehicle in the field by rapidly disassembling the wheel lift apparatus from the support bar and replacing the wheel lift apparatus with an alternate

towing apparatus.

20. The method of Claim 19, wherein the one or more powering mechanisms comprise hydraulic cylinders.

21. The method of Claim 19, wherein the alternate towing apparatus comprises a frame fork attachment.

22. The method of Claim 19, wherein the step of conversion is accomplished by rapidly removing the receivers and from the support bar.

23. The method of Claim 19, wherein the one or more hydraulic cylinders communicate with one or more cylinder rods that are removably attached to the receivers, the cylinder rods being disconnected from the receivers during the conversion step.

24. The method of Claim 19, wherein the wheel lift apparatus comprises a self-loading wheel lift.